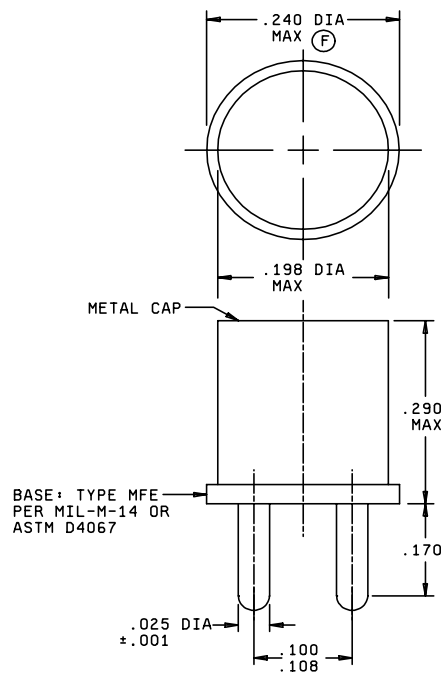


# PERFORMANCE SPECIFICATION SHEET

## FUSES, CARTRIDGE, INSTRUMENT TYPE, STYLE FM07, (SUBMINIATURE - HIGH PERFORMANCE)

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The complete requirements for acquiring the fuses described herein shall consist of this document and the latest issue of MIL-PRF-23419.



Inches	mm
.001	0.03
.025	0.64
.100	2.54
.108	2.74
.170	4.32
.198	5.03
.240	6.10
.290	7.37

### NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is  $\pm .010$  (0.25 mm).

FIGURE 1. Style FM07 fuses.

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REQUIREMENTS:

Interface and physical dimensions: See figure 1.

Fuse cap:

Material: Brass.

Finish: Gold.

Fuse holders:

MIL-PRF-19207/26, MIL-PRF-19207/28, and MIL-PRF-19207/29.

Terminals:

Material: Brass.

Finish: Gold plate.

Current rating: See table I.

Characteristic: See table I.

Voltage rating: See table I.

Resistance: See table I.

Voltage drop: See table I.

Current carrying capacity: 100 percent at +25° C; 110 percent at -55° C, 90 percent at +85° C. Connecting wire shall be #14 and fuseholders shall not be spaced closer than 1 inch (25.4 mm) apart. The temperature of the case, body, or terminals shall rise at no point more than 70 ° C above ambient air temperature.

Terminal strength: 5 pounds-force along terminal axis; 5 pounds-force perpendicular to terminal axis at base.

Overload interrupt: Percentage of nominal rating, interrupt time -55 ° C through +125° C. 200 percent in 0 second to 10 seconds; 300 percent in 0 second to 0.1 second.

Short circuit: Short circuit interrupt rating 10,000 ac amperes.

Shock: Method I, except Part or Identifying Number (PIN) FM07A125V1/500A shall be tested in accordance with method 213 of MIL-STD-202, test condition A. PIN is a new term encompassing previous terms used in specifications such as part number, type designation, and identification number.

Thermal shock: Method 107 of MIL-STD-202, test condition B.

Marking: Manufacturer's name or trademark, current rating, and PIN only.

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Verification: The following tests shall be conducted on 100 percent of the units, in the order shown, prior to any tests referenced in MIL-PRF-23419. Nonconforming units shall be removed from the lot.

Seal: Immerse in a clear mineral oil bath at +125°C for 1 minute. No bubbles shall be detected. (See method 112 of MIL-STD-202, test condition A.)

Voltage drop: See table I.

Resistance: See table I.

Visual and mechanical: Inspection shall be by 3X minimum magnification.

TABLE I. PIN identification.

PIN				Cold resistance (ohms) <u>1/</u>		Voltage drop (volts) <u>2/</u>	
Style	Charac- teristic	Maximum voltage (volts)	Current rating (amperes)	Minimum	Maximum	Minimum	Maximum
FM07	A	125V	1/500A	1,750	2,250	3.56	5.34
FM07	A	125V	1/200A	245	315	1.74	2.60
FM07	A	125V	1/100A	82.2	106	1.28	1.92
FM07	A	125V	1/64A	38.5	49.5	.864	1.30
FM07	A	125V	1/32A	14.4	18.5	.680	1.02
FM07	A	125V	1/20A	2.82	3.58	.168	.247
FM07	A	125V	1/16A	1.98	2.52	.148	.222
FM07	A	125V	1/10A	1.03	1.31	.130	.194
FM07	A	125V	1/8A	.880	1.12	.151	.225
FM07	A	125V	2/10A	2.03	2.57	.400	.600
FM07	A	125V	1/4A	1.54	1.96	.368	.552
FM07	A	125V	3/10A	1.10	1.40	.320	.480
FM07	A	125V	4/10A	.193	.261	.123	.184
FM07	A	125V	1/2A	.142	.192	.110	.160
FM07	A	125V	6/10A	.119	.161	.114	.171
FM07	A	125V	7/10A	.097	.131	.105	.157
FM07	A	125V	3/4A	.088	.120	.101	.151
FM07	A	125V	8/10A	.080	.108	.101	.153
FM07	A	125V	1A	.088	.112	.106	.158
FM07	A	125V	1-1/2A	.0555	.0705	.113	.169
FM07	A	125V	2A	.0405	.0515	.098	.146
FM07	A	125V	3A	.0299	.0381	.106	.162
FM07	A	125V	4A	.0167	.0213	.080	.120
FM07	A	125V	5A	.0159	.0201	.106	.160

1/ Cold resistance is measured at 10 percent or less of rated current.

2/ Voltage drop is measured after the fuse has been subjected to rated current for not less than one minute.

Qualification and group C inspection:

Inspection routine. The number of group II samples for qualification, and subgroup 2 samples for group C inspection, shall be as shown in table II below:

TABLE II. Group II and subgroup 2 samples.

Inspection	Number of sample fuses
Group II and subgroup 2	16
Terminal strength	4
Overload interrupt	
200 percent at -55°C	4
200 percent at +125°C	4
300 percent at -55°C	4
300 percent at +125°C	4
Insulation resistance	16

The number of group III samples for qualification, and subgroup 1 for group C inspection, shall consist of four fuses of each of the types shown in table III. Short circuit interrupt tests shall be conducted at the ac voltage and dc voltage indicated, and the fuses shall be capable of withstanding a minimum short circuit current as shown in table III.

TABLE III. Short circuit tests. 1/

Fuse type	Current rating (amps)	Short circuit current (ac and dc)	AC and DC voltages
FM07	1/500 A	10,000 A	125
FM07	5 A	10,000 A	125

1/ AC short circuit test current may be applied at a random point.

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TABLE IV. Supersession information.

Superseding PIN	Superseded numbers in accordance with MIL-F-23419/7B 17 August 77	Superseded numbers in accordance with MIL-F-23419/7A 18 November 70	Superseded numbers in accordance with MIL-F-23419/7 17 October 68
FM07A125V1/500A	FM07125V1/500A	FM07-125V-1/500A	FM07-1/500A
FM07A125V1/200A	FM07125V1/200A	FM07-125V-1/200A	FM07-1/200A
FM07A125V1/100A	FM07125V1/100A	FM07-125V-1/100A	FM07-1/100A
FM07A125V1/64A	FM07125V1/64A	FM07-125V-1/64A	FM07-1/64A
FM07A125V1/32A	FM07125V1/32A	FM07-125V-1/32A	FM07-1/32A
FM07A125V1/20A	FM07125V1/20A	FM07-125V-1/20A	FM07-1/20A
FM07A125V1/16A	FM07125V1/16A	FM07-125V-1/16A	FM07-1/16A
FM07A125V1/10A	FM07125V1/10A	FM07-125V-1/10A	FM07-1/10A
FM07A125V1/8A	FM07125V1/8A	FM07-125V-1/8A	FM07-1/8A
FM07A125V2/10A	FM07125V2/10A	FM07-125V-2/10A	FM07-2/10A
FM07A125V1/4A	FM07125V1/4A	FM07-125V-1/4A	FM07-1/4A
FM07A125V3/10A	FM07125V3/10A	FM07-125V-3/10A	FM07-3/10A
FM07A125V4/10A	FM07125V4/10A	FM07-125V-4/10A	FM07-4/10A
FM07A125V1/2A	FM07125V1/2A	FM07-125V-1/2A	FM07-1/2A
FM07A125V6/10A	FM07125V6/10A	FM07-125V-6/10A	FM07-6/10A
FM07A125V7/10A	FM07125V7/10A	FM07-125V-7/10A	FM07-7/10A
FM07A125V3/4A	FM07125V3/4A	FM07-125V-3/4A	FM07-3/4A
FM07A125V8/10A	FM07125V8/10A	FM07-125V-8/10A	FM07-8/10A
FM07A125V1A	FM07125V1A	FM07-125V-1A	FM07-1A
FM07A125V1-1/2A	FM07125V1-1/2A	FM07-125V-1-1/2A	FM07-1-1/2A
FM07A125V2A	FM07125V2A	FM07-125V-2A	FM07-2A
FM07A125V3A	FM07125V3A	FM07-125V-3A	FM07-3A
FM07A125V4A	FM07125V4A	FM07-125V-4A	FM07-4A
FM07A125V5A	FM07125V5A	FM07-125V-5A	FM07-5A

Custodians:

Army - CR  
Navy - EC  
Air Force - 85

Preparing activity:

DLA - CC

(Project 5920-0563)

Review activities:

Army - AR, AT, AV, MI  
Navy - AS  
Air Force - 19, 99  
NSA - NS